

## **SECTION 02920**

### **TOPSOIL**

#### **PART 1 GENERAL**

##### **1.01 SCOPE**

- A. This Section includes topsoil products and placement.

##### **1.02 RELATED SECTIONS AND PLANS**

- A. Section 02100 - Surveying
- B. Section 02200 - Earthwork
- C. Section 02250 - Vegetative Soil Layer
- D. Section 02270 - Erosion and Sediment Control
- E. Section 02930 - Vegetation
- F. Section 13000 - Borrow Area Management
- G. Part 6 - Statement of Work
- H. Part 8 - Environmental Health and Safety, and Training Requirements
- I. Part 9 - Quality Assurance Requirements

##### **1.03 REFERENCES**

- A. Latest version of American Society for Testing and Materials (ASTM) Standards:
  - 1. ASTM D 422. Standard Method for Particle-Size Analysis of Soils.
  - 2. ASTM D 2974. Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soil.
- B. U. S. Department of Agriculture Soil Conservation Service, Agriculture Handbook 436

## **1.04 SUBMITTALS**

- A. Include a list of the equipment and description of construction methods to be used for topsoil construction in the Earthwork Work Plan specified in Section 02200.

## **1.05 HEALTH AND SAFETY REQUIREMENTS**

- A. Environmental, health and safety, and other training requirements shall be as specified in Part 8 of the Contract Documents.

# **PART 2 PRODUCTS**

## **2.01 MATERIALS**

- A. Obtain topsoil from on-site borrow sources, on-site excavations and topsoil stockpile shown on the Construction Drawings. Topsoil shall meet the following material requirements:
  - 1. Material shall be a loam, clay loam, silty clay loam, silt loam and sandy clay loam, as classified by U. S. Department of Agriculture Soil Conservation Service and be loose and friable. For topsoil to be considered loamy, that fraction passing the U.S. Standard No. 10 sieve shall contain not more than 40 percent clay-sized fraction, as determined in accordance with ASTM D 422.
  - 2. Topsoil shall be free of metal, debris, foreign objects, large rock fragments, and stumps and other deleterious materials.
  - 3. Topsoil shall contain not less than 3 percent organic matter as determined by loss on ignition of samples oven dried to constant weight (per ASTM D 2974, Method A for moisture content determination and Method C for ash content determination). The topsoil may be amended as approved in writing by the Construction Manager if the organic content is less than three percent.

## **2.02 EQUIPMENT**

- A. Furnish equipment required to haul, place, and spread topsoil.

## **PART 3 EXECUTION**

### **3.01 PLACEMENT**

- A. Do not commence placement of topsoil until CQC Consultant completes conformance evaluation of topsoil material and performance testing of previous work, including evaluation of the Contractor's survey results of the vegetative soil layer in accordance with Section 02250.
- B. Prior to spreading the topsoil, scarify or otherwise loosen the top surface of the existing soil layer to a minimum depth of 1 inch. Scarify using a disc harrow, rake, or other suitable means.
- C. Construct topsoil to the thickness, elevations, and limits shown on the Construction Drawings. Round breaks between slopes on the final cover system.
- D. Place topsoil over approved areas, spread, and lightly track with a Caterpillar D3 dozer, or approved equivalent equipment, so that the equipment grouser marks are perpendicular to the direction of runoff flow.
- E. Place and spread topsoil to a depth sufficiently greater than required so that after tracking and natural settlement, the completed work will conform to the thickness requirement of this Section.
- F. Do not spread topsoil in water or while frozen or muddy. If soil or weather conditions are unsuitable, as determined by the Construction Manager, cease placing topsoil until permission to resume topsoil operations is obtained from the Construction Manager.
- G. After topsoil has been placed and spread, remove stiff clods, lumps, roots, litter, and other foreign material. Remove stiff clods larger than 3 inches in diameter or reduce in size by raking, discing, or other processing.
- H. Use erosion and sediment control measures to protect the topsoil layer as specified in Section 02270.
- I. Within 72 hours of the completion of the placement of topsoil in an area, vegetate the area in accordance with Section 02930.
- J. Repair any erosion or washout of the topsoil layer prior to final acceptance of vegetation by the Construction Manager in accordance with Section 02930.

### **3.02 CONSTRUCTION QUALITY REQUIREMENTS**

- A. CQC Consultant will perform soil conformance testing on the topsoil material to establish compliance with this Section. Conformance testing to be performed and testing frequencies are given in the Construction Quality Assurance (CQA) Plan, referenced in Part 9 of the Contract Documents.

### **3.03 SURVEY CONTROL**

- A. Survey the limits and elevations of the top surface of the topsoil layer in accordance with Section 02100.

### **3.04 TOLERANCE**

- A. Construct the topsoil layer to within  $\pm 0.1$  feet of the thickness shown on the Construction Drawings.
- B. Construct the topsoil layer to within 0.0 to +0.5 feet of the elevations indicated on the Construction Drawings.

[END OF SECTION]